## PATHOPHYSIOLOGY OF ALZHEIMER'S DISEASE AND OTHER NEURODEGENERATIVE DISORDERS

- A. Primary deficiency of cell-specific carbonic anhydrase enzyme due to defective gene-link carbonic anhydrase enzymes
- B. Secondary deficiency of cell-specific carbonic anhydrase enzyme due to:
  - 1. Neurotoxic materials, such as aluminum, iron, and lead
  - 2. Infections that alter the blood-brain barrier
  - 3. Amyloid deposits that alter the blood-brain barrier
  - 4. Other conditions or diseases that alter the blood-brain barrier that displace the zinc from cell-specific carbonic anhydrase enzymes

